

Amend the title wherever it appears to recite the following:

A System and Method for Identifying Target Sequence or a Target Structure

Motif.

Insert the attached pages 18-24 for the originally-filed similarly numbered pages of the specification.

Delete the paragraph spanning line 2 of page 349 to line 12 of page 350 and

insert the following therefore:

C1 The amino acid sequence (IMDH ECOLI) of *Escherichia coli* IMP dehydrogenase as the amino acid sequence of the protein, of which function had been confirmed as IMP dehydrogenase (EC1.1.1.205), was obtained from Swiss-prot Database. By using the full length of this amino acid sequence as a query, a homology search was carried out on a nucleotide sequence database of the genome sequence of *Corynebacterium glutamicum* or a database of the ORF amino acid sequences predicted from the genome sequence using FASTA program. A case where E-value was  $10^{-10}$  or less was judged as being significantly homologous. As a result, the amino acid sequences encoded by two ORFS, namely, an ORF positioned in the region of the nucleotide sequence No. 615336 to 616853 (or ORF having the nucleotide sequence represented by SEQ ID NO:672) and another ORF positioned in the region of the nucleotide sequence No. 616973 to 618094 (or ORF having the nucleotide sequence represented by SEQ ID NO:674) were significantly homologous with the ORFs of *Escherichia coli* IMP dehydrogenase. By using the above-described predicted amino acid sequence as a query in order to examine the similarity of the amino acid sequences encoded by the ORFs with IMP dehydrogenases of other organisms in greater detail, a search was

carried out on GenBank (<http://www.internet-address.ncbi.nlm.nih.gov/>) nr-aa database (amino acid sequence database constructed on the basis of GenBankCDS translation products, PDB database, Swiss-Prot database, PIR database, PRF database by eliminating duplicated registrations) using BLAST program. As a result, both of the two amino acid sequences showed significant homologies with IMP dehydrogenases of other organisms and clearly higher homologies with IMP dehydrogenases than with amino acid sequences of other proteins, and thus, it was assumed that the two ORFs would function as IMP dehydrogenase. Based on these results, it was therefore assumed that *Corynebacterium glutamicum* has two ORFs having the IMP dehydrogenase activity.

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Insert the attached formal drawings in place of the originally-filed drawings.